

### Abstract of the Disclosure

The present invention relates to a device for picking up biological electrical signals, and more precisely auditory evoked potentials generated by acoustic and/or electrical and/or mechanical stimulation of the cochlea, or of a portion of the auditory system in man or animal. The 5 device for measuring or picking up auditory evoked potentials is surgically implantable in the temporo-occipital area and comprises at least two extracochlear pickup electrodes connected to the inputs of a differential amplifier.